Excimer laser with unstable optical resonator - has concave rear mirror and cylindrical output mirror contg. internal face of concave shape to produce divergence of laser beams in perpendicular directions which approach one another

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Abstract

The unstable optical resonator consists of a concave rear mirror (12) and a cylindrical-segment output coupling mirror (14) such that the divergences of the laser beam are moved to each other in mutually orthogonal directions. Only the reflective face of the rear mirror needs to be cylindrical, while the output coupling mirror must be cylindrical on both sides. The radius of curvature of the rear mirror is positive, while that of the output coupling mirror is negative.
ADVANTAGE - Equalisation of direction dependent divergences without loss of laser energy.